

### ABSTRACT OF THE DISCLOSURE

A method for producing DNA size standards includes using a DNA template having multiple copies of a nucleotide motif sequence. A dideoxy sequencing reaction is prepared which uses the DNA template. In the sequencing reaction, one dideoxy nucleotide terminator is included. The synthesized DNA size standard comprises a mixture of DNA fragments. Each DNA fragment is formed of a respective number of copies of the nucleotide motif. In one further embodiment, each DNA fragment varies in length, from a next shorter or a next longer DNA fragment, by the length of one nucleotide motif sequence.